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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/823,609	04/14/2004	Akira Igarashi	251790USCONT	5551
22850	7590	12/08/2004	EXAMINER	
OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			LANGEL, WAYNE A	
			ART UNIT	PAPER NUMBER
			1754	

DATE MAILED: 12/08/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/823609

Applicant(s)

Igarashi et al

Examiner

Langel

Group Art Unit

1754

— The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address —

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- ☐ Responsive to communication(s) filed on _____
- ☐ This action is **FINAL**.
- ☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- ☒ Claim(s) 13-17 is/are pending in the application.
- Of the above claim(s) _____ is/are withdrawn from consideration.
- ☐ Claim(s) _____ is/are allowed.
- ☒ Claim(s) 13-17 is/are rejected.
- ☐ Claim(s) _____ is/are objected to.
- ☐ Claim(s) _____ are subject to restriction or election requirement

Application Papers

- ☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.
- ☐ The drawing(s) filed on _____ is/are objected to by the Examiner
- ☐ The specification is objected to by the Examiner.
- ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119 (a)-(d)

- ☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119 (a)-(d).

☒ All ☐ Some* ☐ None of the:

- ☐ Certified copies of the priority documents have been received.

☒ Certified copies of the priority documents have been received in Application No. 09/720262

- ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a))

*Certified copies not received: _____

Attachment(s)

- ☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____
- ☒ Notice of Reference(s) Cited, PTO-892
- ☐ Notice of Draftsperson's Patent Drawing Review, PTO-948
- ☐ Interview Summary, PTO-413
- ☐ Notice of Informal Patent Application, PTO-152
- ☐ Other _____

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The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) The invention was described in (1) an application for patent, published under Section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

The following is a quotation of 35 U.S.C. § 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 13-15 are rejected under 35 U.S.C. 102(b) as

anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over DE 3918317. DE 3918317 discloses a catalyst having an improved heat resistance which is suitable for purifying motor vehicle exhaust gases obtained by applying to an inorganic catalyst support a catalyst metal which is composed of rhenium and platinum. (See the Abstract and the paragraph bridging pages 2 and 3.) It appears from page 2, lines 6-11 of DE 3918317 that aluminum oxide is disclosed as a suitable catalyst support. In any event, it would be prima facie obvious to employ aluminum oxide as the inorganic catalyst support for the catalyst, since aluminum oxide is a conventional catalyst support. Regarding claims 14 and 15, DE 3918317 teaches in the first full paragraph on page 3 that the catalyst may contain 0.1 to 2.0% platinum and 0.001 to 0.5% rhenium. The catalytic converter of DE 3918317 is considered to constitute a "carbon monoxide removing unit" as recited in applicant's claims.

Claims 13 and 16 are rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Jensen et al. Jensen et al. disclose a catalyst comprising a refractory inorganic oxide upon which may be dispersed a catalyst which includes metallic platinum, metallic rhenium and cerium. (See column 5, lines 44-61.) Claims 13 and 16 are considered to be anticipated by Jensen et al., since

Jensen et al. specifically disclose the metals platinum, cerium and rhenium in the list of metals at column 5, lines 51-61. In any event, it would be prima facie obvious to employ platinum, rhenium and cerium as the metals in the catalyst of Jensen et al., since it would be within the skill of one of ordinary skill in the art to determine which combination of metals would be suitable. The dehydrogenation reactor employed in the process of Jensen et al. is considered to constitute a "carbon monoxide removing unit" as recited in applicants' claims.

Claims 14, 15 and 17 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Jensen et al. It would be prima facie obvious to employ the platinum, rhenium and cerium in an amount of between 0.1% and 10.0% by weight based on the weight of the metal oxide carrier in the catalyst of Jensen et al., since it would be within the skill of one of ordinary skill in the art to determine a suitable or optimum amount of the platinum, rhenium or cerium to employ.

Claims 13 and 14 are rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Zhang. Zhang discloses a catalyst comprising from about 0.1% to about 5% by weight of platinum on a support such as alumina, zirconia or titania, and wherein the catalyst may also contain rhenium. (See column 2, lines 43-67.) Claims 13 and 14

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are considered to be anticipated by Zhang, since Zhang discloses rhenium as a suitable additional metal at column 2, line 65. In any event, it would be prima facie obvious to select rhenium as the additional metal from the list of metals disclosed at column 2, lines 63-67 of Zhang, since it would be within the skill of one of ordinary skill in the art to determine which of such metals would be suitable for the catalyst. The glass reactor employed in the reaction disclosed in Example 4 of Zhang is considered to constitute a "carbon monoxide removing unit" as recited in applicants' claims.

Claim 15 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Zhang. It would be prima facie obvious to employ rhenium in an amount of from 0.1% to 10% by weight based on the weight of the metal oxide carrier in the catalyst of Zhang, since it would be within the skill of one of ordinary skill in the art to determine a suitable or optimum amount of rhenium to employ.

Claims 13-17 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Ou et al. Ou et al. disclose a water gas shift reactor in which the catalyst may include Group VIII, Group VIIB, and Group IIIB metals. (See the Abstract and column 5, line 36 - column 7, line 5.) It would be prima facie obvious to employ platinum, rhenium and either yttrium or lanthanum as such

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metals. Ou et al. further disclose at column 6, lines 46-65 that the catalyst support may be such inert porous supports as alumina, zirconia or titania.

Claims 13-15 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Clawson et al. Clawson et al. disclose a water-gas shift reactor in which the catalyst may comprise supported platinum or supported rhenium on a metal oxide carrier such as zirconia, silica or alumina. (See column 5, lines 14-35.) The difference between the catalyst disclosed by Clawson et al., and that recited in claims 13-15, is that Clawson et al. do not disclose that the platinum and rhenium should be employed in combination as the catalyst. It would be prima facie obvious to employ both platinum and rhenium as the supported catalyst of Clawson et al., since one of ordinary skill in the art would expect that if platinum and rhenium functioned individually as water-gas shift catalysts, then a combination of platinum and rhenium would also function as such a catalyst. There is no evidence on record of synergism which would result from a combination of platinum and rhenium as the catalyst for the water-gas shift reaction of Clawson et al.

The non-statutory double patenting rejection, whether of the obviousness-type or non-obviousness-type, is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent. *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA

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1969); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); and *In re Goodman*, 29 USPQ 2d 2010 (Fed. Cir. 1993).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(b) and (c) may be used to overcome an actual or provisional rejection based on a non-statutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.78(d).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 13-17 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-16 of U.S. Patent No. 6,777,117. Although the conflicting claims are not identical, they are not patentably distinct from each other because it would be prima facie obvious to employ a carbon monoxide removing unit for removing the carbon monoxide from the hydrogen gas in the process recited in the claims of Patent 6,777,117.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Wayne A. Langel whose telephone number is (571) 272-1353. The examiner can normally be reached on Monday through Friday from 8 A.M. to 3:30 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stanley Silverman, can be reached on (571) 272-1358. The fax phone number for this

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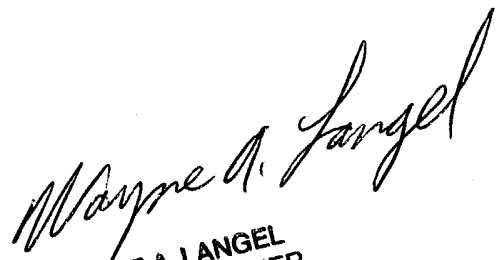
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Group is (703) 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either private PAIR or public PAIR. Status information for unpublished applications is available through private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

WAL:cdc

December 6, 2004


WAYNE A. LANGEL
PRIMARY EXAMINER